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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,722	08/13/2003	Hung-Jen Wei	ACMP0068USA	1721

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(NAIPC) NORTH AMERICA INTERNATIONAL PATENT OFFICE
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

BLACKMAN, ROCHELLE ANN J

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,722

Applicant(s)

WEI ET AL.

Examiner

Rochelle Blackman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-14,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-14,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 2, 4-9, 11-14, 17, and 18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 8, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemke (U.S. Patent No. 5,615,938).

Lemke discloses an image projection system (FIGS. 1-8) comprising: a light source (3) for generating a light beam; a reflective housing (4) comprising an opening (see space between "reflective housing" 4 and element 5), the reflective housing forming an accommodating space (see space inside "reflective housing" 4), the light source installed inside the accommodating space so that the light beam generated by the light source substantially propagates along an optical path through the opening away from the accommodating space; and an invisible-light reflector (5) installed at a reflecting position intersecting with the optical path outside the opening of the reflective housing, a normal of the invisible-light reflector and the optical path intersecting to form a

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predetermined angle so that invisible light of the light beam emitted from the opening will be reflected back into the accommodating space (see normal of "invisible-light reflector" 5 relative to the optical path formed by "light source" 3); wherein the predetermined angle formed by the normal of the invisible-light reflector and the optical path is an acute angle not equal to zero degrees (also see normal of "invisible-light reflector" 5 relative to the optical light path formed by "light source" 3), so that infrared rays of the light beam reflected back into the accommodating space by the invisible-light reflector will not focus on the reflective housing; wherein the reflective housing is an elliptic reflective housing (see 4), and the light source is installed at a focal point of the elliptic reflective housing, and the optical path is a major axis of the elliptic reflective housing (see position of 3); wherein the image projection system further comprising a light tube (see 3) connected to the light source, wherein the infrared rays of the light beam reflected back into the accommodating space by the invisible-light reflector will not focus on the light tube (see col. 4, lines 6-10); wherein the acute angle is smaller than 45 degrees (also see normal of "invisible-light reflector" 5 relative to the optical path formed by "light source" 3); wherein the reflective housing is a parabolic reflective housing (see 4), and the optical path is a parallel route by which the light beam propagates after being reflected by the parabolic reflective housing (see optical light path of "light source" 3); wherein the invisible-light reflector is immediately adjacent to the reflective housing along the optical path (see position of "invisible-light reflector" 5 relative to "reflective housing" 4).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-9, 11-14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aritake et al. (U.S. Patent No. 6,478,429) in view of Lemke (U.S. Patent No. 5,615,938).

Aritake discloses an image projection system (FIGS. 1-42) comprising: a light source (21) for generating a light beam; a reflective/ elliptic reflective housing (22) comprising an opening (see inside area of 22), the reflective housing forming an accommodating space (also see inside area of 22), the light source installed inside the accommodating space so that the light beam generated by the light source substantially propagates along an optical path through the opening away from the accommodating space (see position of 21); an image module (56-4 and 74 of FIGS. 24A-C) comprising a plurality of controllable optical reflectors for modulating the light beam to generate a projecting beam containing an optical image; and an invisible-light reflector (37 of FIGS. 7 and 8) installed at a reflecting position intersecting with the optical path outside the opening of the reflective housing, a normal of the invisible-light reflector and the optical path intersecting to form a predetermined angle (the predetermined angle is 0 degrees) so that invisible light of the light beam emitted from the opening will be reflected back into the accommodating space; the light source is installed at a focal point of the elliptic

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reflective housing (see position of "light source" 21), and the optical path is a major axis of the elliptic reflective housing (see optical light path of "light source 21"); wherein the image projection system further comprising a light tube (see 21) connected to the light source, wherein the infrared rays of the light beam reflected back into the accommodating space by the invisible-light reflector will not focus on the light tube; wherein the image projection system further comprises an image module, the image module comprising a plurality of controllable optical reflectors for modulating the light beam passing through the invisible-light reflector to generate a projecting beam containing an optical image, wherein the light beam passing through the invisible-light reflector does not comprise the infrared rays; wherein the image module is a digital micro-mirror device (see 56-4 and 74); wherein the reflective housing is a parabolic reflective housing (see 22), and the optical path is a parallel route by which the light beam propagates after being reflected by the parabolic reflective housing (see optical light path of "light source" 21); wherein the light source, the reflective housing, and the invisible-light reflector form an integral structure (see 21, 22, and 37 of FIGS. 7 and 8); wherein the image module is a liquid crystal panel (see 26, 56); wherein the invisible-light reflector is immediately adjacent to the reflective housing along the optical path (see position of 37 relative to 22).

Aritake does not appear to disclose wherein the predetermined angle formed by the normal of the invisible-light reflector and the optical path is an "acute angle not equal to zero degrees" and wherein the "acute angle is smaller than 45 degrees".

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Lemke teaches providing a predetermined angle formed by a normal of an invisible-light reflector (5) and the optical path is an acute angle not equal to zero degrees, wherein the acute angle is smaller than 45 degrees (see normal of "invisible-light reflector" 5 relative to the optical light path formed by lamp 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the "image projection system" of the Aritake with an invisible-light reflector with the salient features of the Lemke reference in order to reflect radiation out of the light beam (see col. 4, lines 6-10).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER